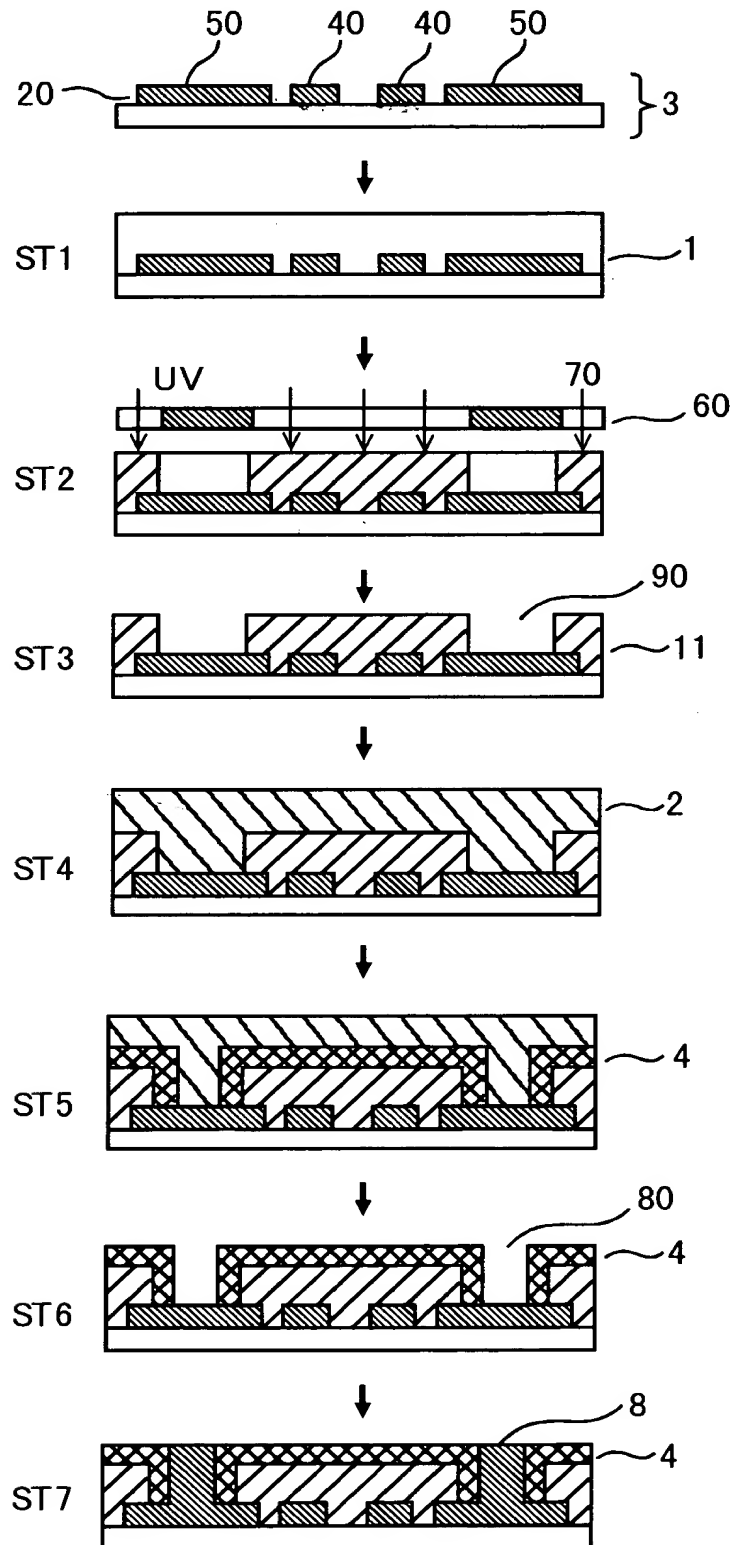
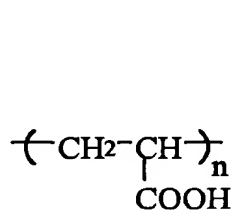


Fig. 1

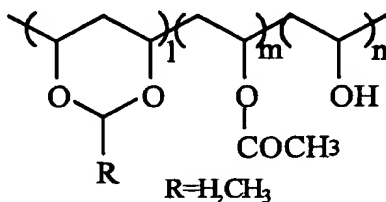


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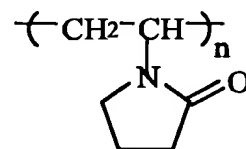
Fig.2



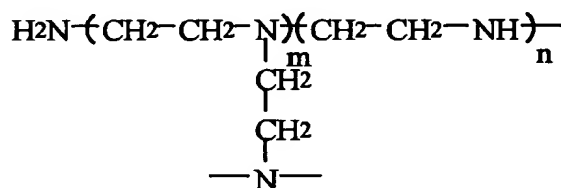
polyacrylic acid



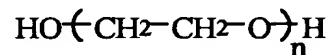
polyvinyl acetal



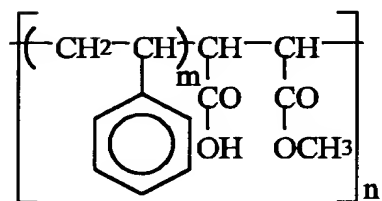
polyvinyl pyrrolidone



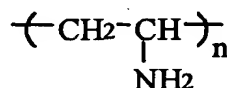
polyethyleneimine



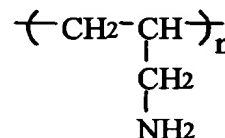
polyethylene oxide



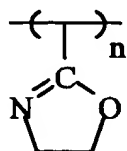
styrene-maleic acid copolymer



polyvinylamine resin



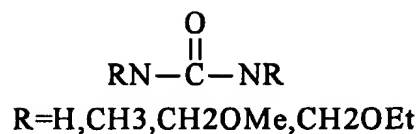
polyallylamine



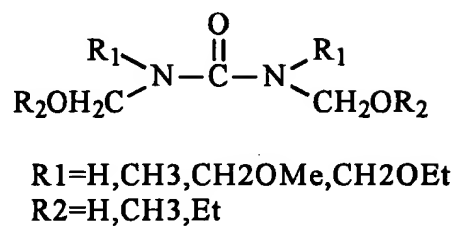
oxazoline group-containing  
water-soluble resin

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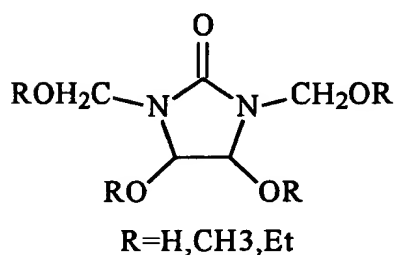
Fig.3



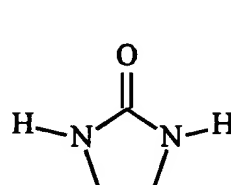
ureaderivatives



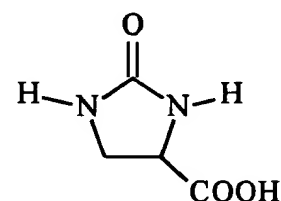
alkoxymethylurea



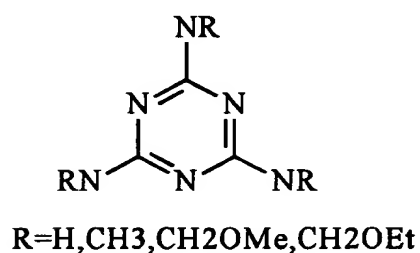
N-alkoxyethyleneurea



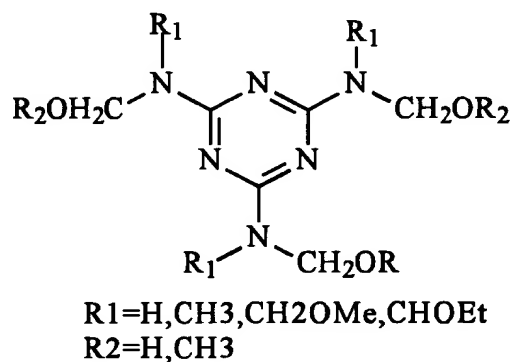
ethyleneurea



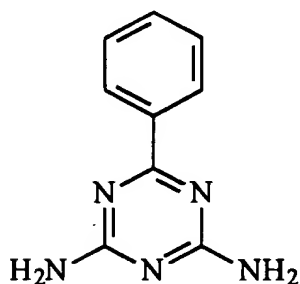
ethyleneureacarboxylic acid



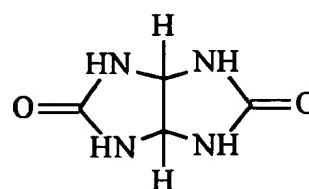
melamine derivatives



alkoxymethylmelamine derivatives



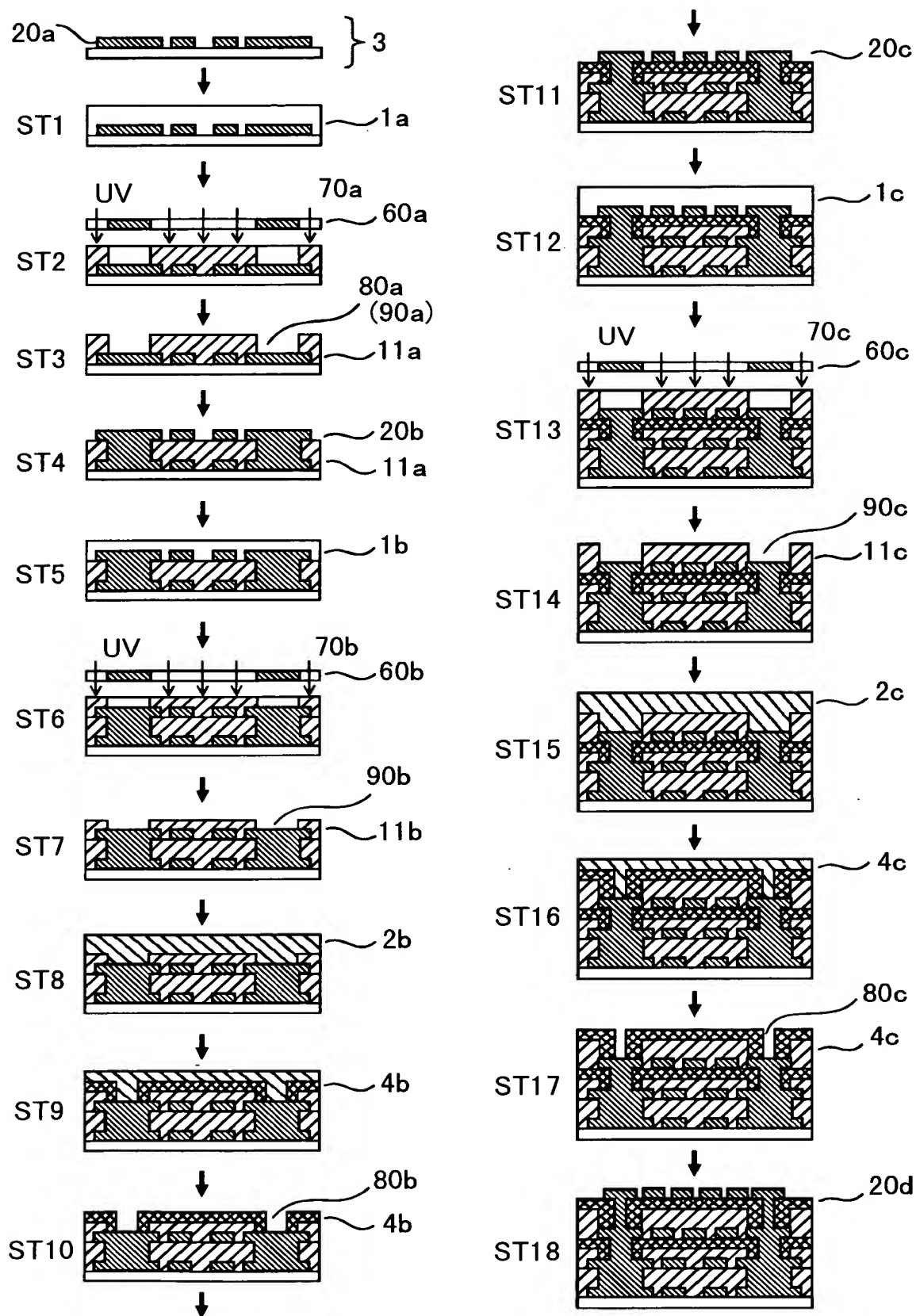
benzoguanamine



glycoluril

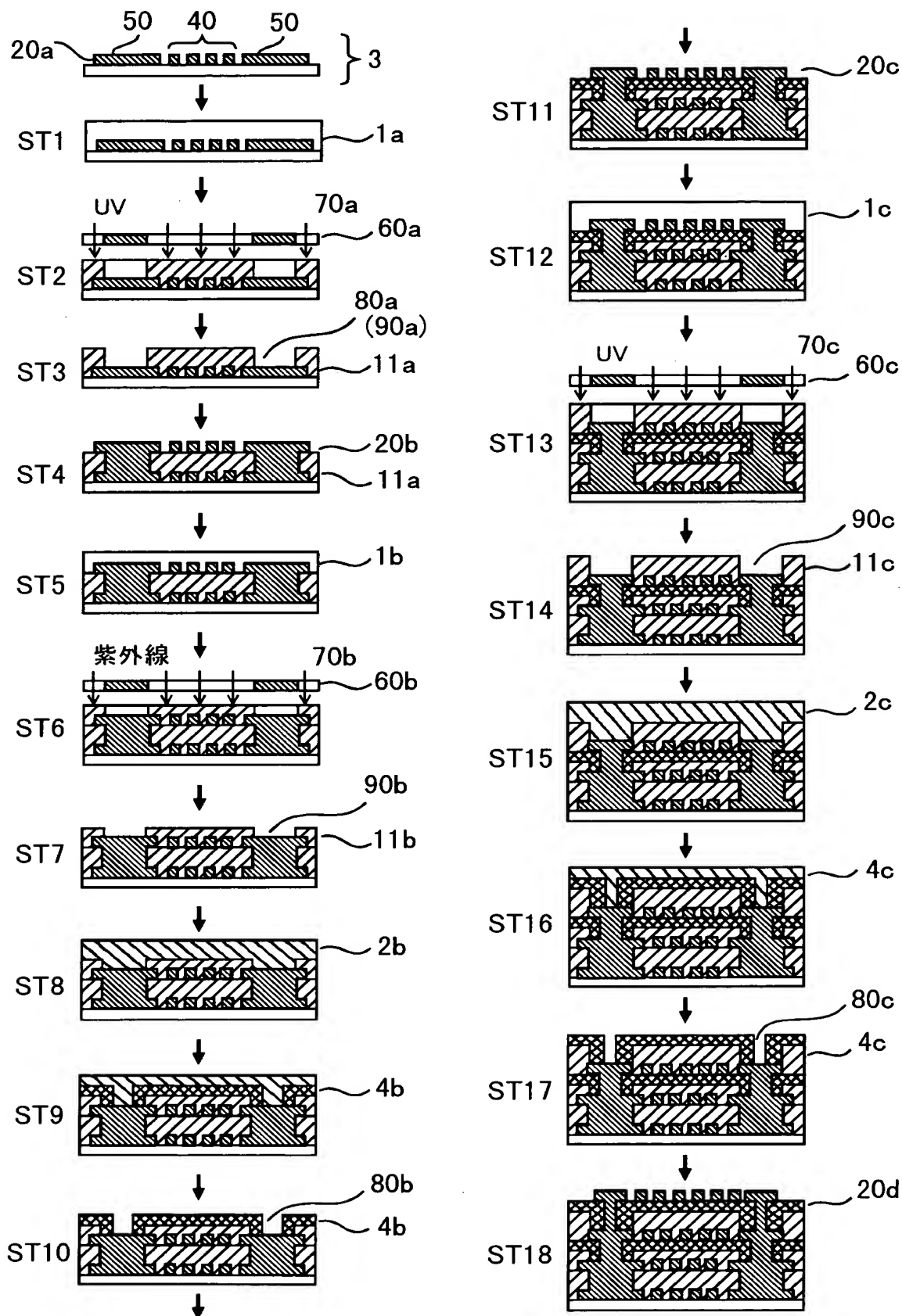
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Fig.4



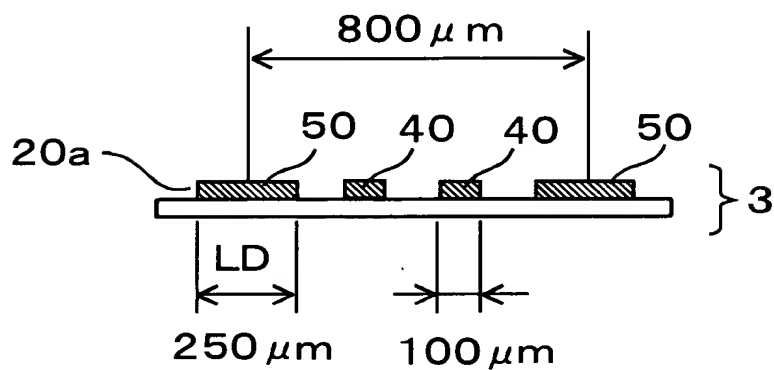
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Fig.5



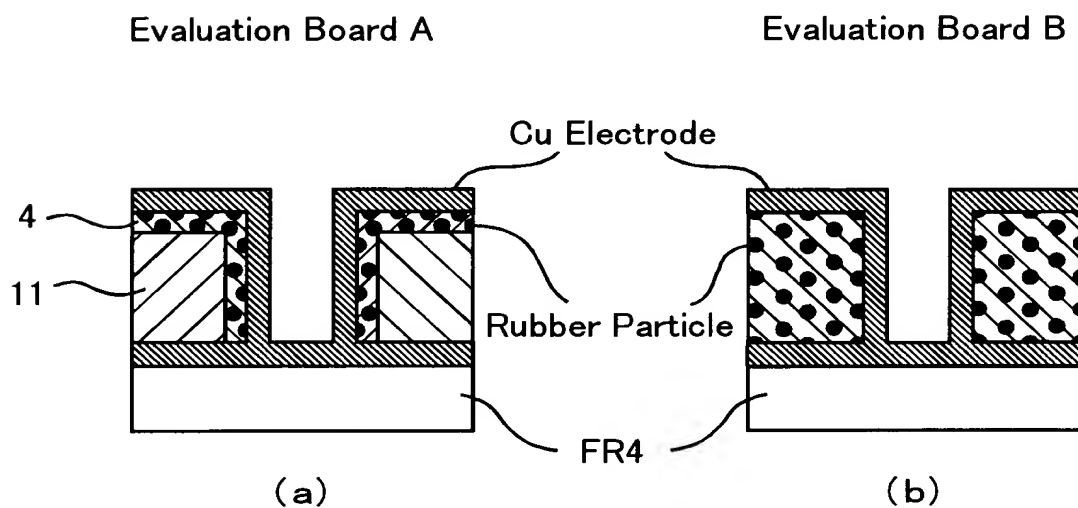
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Fig.6



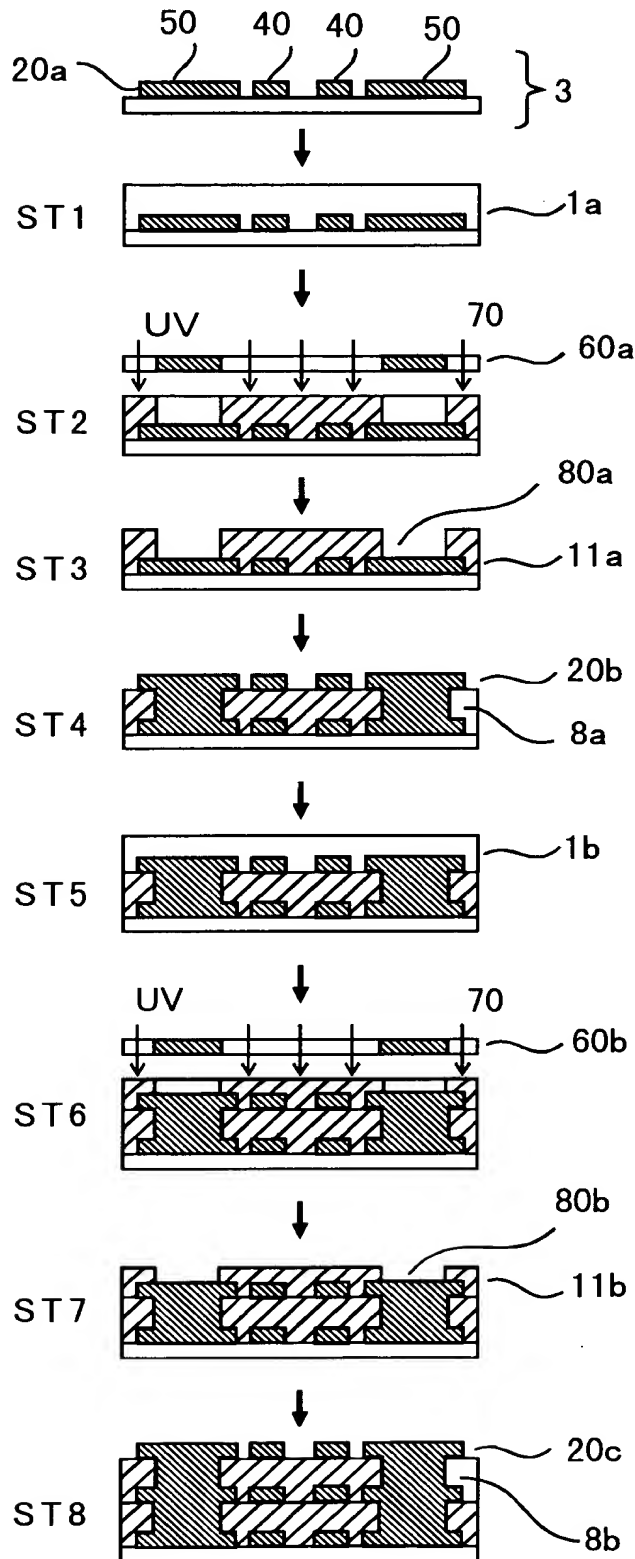
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Fig.7



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Fig.8  
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Table 1

Condition	Diameter of Via-Hole
Non Heat Treatment	150 $\mu$ m
120°C/60min	130 $\mu$ m
130°C/30min	100 $\mu$ m
140°C/30min	70 $\mu$ m

Table 2

Condition	Diameter of Via-Hole
Non Heat Treatment	150 $\mu$ m
110°C/10min	120 $\mu$ m
110°C/20min	100 $\mu$ m
110°C/30min	80 $\mu$ m
135°C/40min	40 $\mu$ m

Table 3

Condition	Diameter of Via-Hole
Non Heat Treatment	150 $\mu$ m
110°C/15min	120 $\mu$ m
120°C/15min	100 $\mu$ m
130°C/15min	80 $\mu$ m
135°C/20min	45 $\mu$ m

Table 4

Condition	Diameter of Via-Hole
Non Heat Treatment	100 $\mu$ m
120°C/30min	96 $\mu$ m
130°C/30min	90 $\mu$ m
140°C/30min	83 $\mu$ m

Table 5

Sample	Dielectric Constant 〔 1kHz 〕 〔 25°C 〕	Thermal Expansion 〔 Vertical 〕 〔 80~120°C 〕	Peel Strength 〔 90° Peel 〕 〔 25°C 〕
Evaluation Board A	4. 5	40ppm	980kg/cm
Evaluation Board B	4. 8	55ppm	970kg/cm

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